

THE EFFECT OF SELF-EFFICACY AND SELF-RESILIENCE ON ATTITUDE OF OCCUPATIONAL HEALTH AND SAFETY AT SMK SMK MUDA PATRIA KALASAN

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Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh (1) efikasi diri terhadap (2) sikap K3 saat praktikum di bengkel pada siswa kelas XII SMK Muda Patria Kalasan. Tujuan kedua yaitu untuk mengetahui pengaruh mediasi variabel (3) resiliensi diri terhadap hubungan efikasi diri dengan sikap K3 saat praktikum di bengkel pada siswa kelas XII SMK Muda Patria Kalasan. Penelitian ini merupakan penelitian sebab akibat (*causal research*) dengan pendekatan survei. Subyek penelitian ini adalah siswa kelas XII SMK Muda Patria Kalasan Tahun Ajaran 2012/2013. Teknik pengambilan sampel yang digunakan adalah sampling jenuh, yaitu mengambil seluruh siswa sebagai subjek. Jumlah subjek penelitian ini sebanyak 59 siswa. Metode pengumpulan data dengan menggunakan kuesioner. Teknik analisis data yang digunakan adalah analisis jalur. Hasil penelitian ini menunjukkan bahwa: (1) terdapat pengaruh yang positif dan signifikan antara efikasi diri terhadap sikap K3 pada siswa kelas XII SMK Muda Patria Kalasan dengan $p = 0,000$ ($p < 0,05$), sedangkan besarnya pengaruh atau sumbangan efektif efikasi diri terhadap sikap K3 adalah 0,222 atau sebesar 22,2%. Sebanyak 77,8% sisanya dipengaruhi oleh faktor lain, diantaranya yaitu: tanggung jawab individu, peraturan keselamatan dan keamanan kerja yang diberlakukan di lingkungan kerja, kepemimpinan guru serta kesadaran siswa, (3) Efikasi diri memberikan pengaruh positif sebesar 0,129 atau 12,9% terhadap sikap K3 secara tidak langsung melalui resiliensi diri. Sedangkan sisanya sebesar 87,1% dapat dipengaruhi oleh faktor lain, antara lain pengaruh mediasi variabel pengetahuan, motivasi, serta kesadaran siswa akan keselamatan kerja. Pihak Sekolah disarankan untuk memberikan dorongan dan motivasi kepada siswa agar meningkatkan sikap positif terhadap K3. Hal ini dapat diupayakan melalui pemberian bimbingan dan pelatihan tentang efikasi diri dan resiliensi diri. Sekolah dapat mengambil tindakan tegas terhadap siswa yang melanggar peraturan dan memberikan sanksi sesuai peraturan yang berlaku. Bagi siswa disarankan memperbanyak informasi tentang K3, meningkatkan tanggung jawab dan disiplin dalam melaksanakan peraturan dan prosedur praktek kerja di bengkel.

Kata kunci: efikasi diri, resiliensi diri, sikap K3

Abstract

The aim of this study is to determine the effect of (1) self efficacy toward the (2) attitude of occupational health and safety on practicum at the workshop of class XII SMK Muda Patria Kalasan. The second objective is to determine the effect of mediating variables of (3) self-resilience toward the relationship of self-efficacy to the attitude of occupational health and safety on practicum times at the workshop of class XII SMK Muda Patria Kalasan. This research is a causal research with survey approach. The subjects of this study were students of class XII of SMK Muda Patria Kalasan 2012/2013. The sampling technique used was saturation sampling. The number of subjects of this studies as many as 59 students. Method of data collection used was questionnaires. The data analysis technique used was path analysis. The results of this study show that: (1) there is a positive and significant correlation between self-efficacy toward attitude of occupational health and safety in class XII SMK Patria Muda Kalasan with $p = 0.000$ ($p < 0.05$), whereas the influence of self-efficacy to attitude of occupational health and safety is 0.222 or 22.2%. While the remaining 77.8% is influenced by other factors, such as: individual responsibility, safety and job security regulations in force in the workplace, leadership teacher and student awareness, (2) Self-efficacy had a positive influence of 0.129 or 12.9% toward attitude of occupational health and safety indirectly through self-resilience. While the remaining 87.1% can be affected by other factors, such as the influence of mediating variables of knowledge, motivation, and awareness of students will be safety. School parties are advised to provide encouragement and motivation to the students in order to increase positive attitude of occupational health and safety. This can be pursued through the provision of guidance and training on self-efficacy and self-resilience. Schools can take action against students who break the rules and provide appropriate sanctions regulations. For students recommended propagate information about occupational health and safety, improve accountability and discipline in carrying out the rules and procedures of working practices in the workshop.

Keywords: attitude of occupational health and safety, self efficacy, self resilience

Education has an important role in ability of persons quality development. Development of education focusing on human resource, qualities and capabilities has been going forward and self-supporting because of education basically is institution which necessary for preparation process and improvement of human resource quality and competitive performance that competence in the implementation. Today education proves that there is closely related to the occupational world. these days National education concept refers to preparation of labour ready, that is vocational education.

Vocational education aimed to increase intelligence, knowledge, personality, glory behavior, and skill of educates participant to self-supporting live and follows further education as according to its vocational program. Educative participant must have high stamina to work efficient and effective while develops expertise and skill nor masters its expertise area based on science and technology, has a high activity ethos, could communicate according to work demand and has ability to develop. The vocational education curriculum structure in this case is vocational high school (SMK)[1].

School activity at SMK Muda Patria Kalasan in the execution there are activity that in general executed by student, which is production work Practicum. Student is expected to be able to operate equipments from hand and machines as a means of assists operation of electrical systems and electronics systems becoming element to form enthusiasm operates industrial equipments based on electronic equipments [2].

Practicum activities in the workshop has very high risk. Students are expected to understand the principles, rules, norms and standards of safety systems on electro mechanical work. A student who works in a workshop environment especially on vocational technical knowledge should know about safety. Students should know the procedure on how to work correctly, safely and survived well as a person who involved in the work done, the work piece and work environment in the vicinity. Occupational accidents could causing harm to everyone who involved, either directly or indirectly. Accidents causes pain or other physical disorders for people who are concerned [2].

Safety precautions consists several things that need to be considered, such as using protective body covering such as eyewear, hands, nose, feet, head, and ears protection as well as uses for the electrical safety devices [2]. The observations of researchers at SMK Muda Patria Kalasan Production Workshop indicated that some class XII students who did not use protective attributes in workshop, such as protective hand etc.

Student behavior that causing accidents, such as joke, not concentrating, playing around with co-workers or other fittings. The other students behavior is hurrying on brings hazardous materials improperly in the workplace [2]. It occurred on the implementation of the class XII SMK Muda Patria Kalasan student at practicum. that Conditions indicate there is a student at the school yet hasn't implemented of health and safety norms correctly.

The person attitudes is influenced by many factors, including the internal factors or external factors of individual. The internal factors consist of physical and psychological factors [3]. One of the psychological factors that influence the attitude and behavior of the individual is self efficacy. Bandura [4] says that self efficacy have big influence on behavior. Students with low self-efficacy won't to try or learn to do the test, its because they do not believe that learning helped him solves the problems. Self efficacy also influence the selection of behavior. Students who have high self efficacy will motivates themselves to achieve positive results [5]. A highly motivated Students behave health and safety attitude on work expressed by behave well and work safely [6]. Based on the above explanation, students who have high self-efficacy also have capability to carrying out or participate

in the activities and health and safety regulations, so they can take a decision on which behaviors are healthy and safe at work.

The other factors that influence a person's attitude is self resilience. According to Grotberg [7] he stated that resilience is the ability of humans to deal with, cope with, and be strong for the difficulties they had experienced. According Reivich and Shatte [8], a resilient individual has several properties, among which is optimistic. Optimism marks the individual believes that he has the ability to solve the problems, and believe many things change to be better. Confidence and optimism is shown when they're dealing with problems. Optimism continues driven individuals to find out the problems solution, and continue to work hard for better conditions [9]. Resilient individuals who have the ability to identify the problems cause accurately. Self resilience contributing on individual behavior. Resilience also supports the self-efficacy ability on occupational health and safety behavior.

The interviews results is some students of class XII SMK Muda Patria Kalasan indicated some students have low self efficacy. These students lack confidence in doing practical work at the workshop. The results also indicated some students who are less resilient. These students is easy to frustration when the problems related to the tasks in the lab occurred.

The resilient Students had been lessons by their experience as well as learning occupational safety and health from their teachers. Adequate knowledge about its safety and health affected the students to addressing all safety and health matters. Students are more favorable to the action as well as health and safety rules in the workshop.

One of the resiliency component is self efficacy [9]. Self efficacy has nothing to do with the attitude in the work safely. Students who have a higher self efficacy has tend to have the ability to overcome various problems and respond to a variety of things, and has a better level of resilience [10]. These conditions affects the student attitudes on health and safety in the workshop implementation.

Research Methods

This research uses the study of causal research with survey method approach. The main objective of this research is to identify the causal relationship between the various variables. This population research is the class XII SMK Patria Muda Kalasan students of the year 2012/2013 with 59 students as sample. Due to its limited on total population so all of the XII SMK Patria Muda Kalasan students of the year 2012/2013 populations as sample in this study. The data collection method used is questionnaire.

The research data were analyzed using simple linear regression and multiple linear regression, before the data is processed with validity and reliability. The validity test of the questionnaire items was conducted by Pearson's product moment correlation while the measurement reliability using Cronbach's alpha formula. The data analysis technique used is linear regression analysis and path analysis. To measure how far the model's ability to explain variation in the dependent variable viewed through a determination coefficient (R^2).

Results and Discussion

Analysis test of validity instrument is using the product moment formula for 57 items, 17 items about self efficacy, resilience self about 25 items and 15 items of health and safety attitudes. Test results using a significance level of 5% obtained $r_{\text{tabel}} = 0,325$. The question Item be valid if $p\text{-value} < 0.05$ atau $r_{\text{hitung}} > r_{\text{tabel}}$. There are 13 self efficacy valid questions items, 21 point valid about self resilience and 15 points about the attitude of the health and safety. Reliability analysis calculations using Cronbach alpha formula produces an alpha value of 0.692 on the instrument self efficacy, resilience instruments 0.850 and 0.892 on the instrument itself and the attitude of the health and safety.

Descriptive Analysis for self efficacy variables obtained mean = 40.92, median = 41, mode = 40, standard deviation = 3.36, minimum score = 31 and maximum score = 49. The tendency description of self efficacy variable score is presented in the form of frequency distribution at Tabel 1. Based on result of this research can be interpreted that class student XII SMK Muda Patria Kalasan has self efficacy tendency in very high category.

Tables 1. Distribution tendency of self efficacy

No.	Interval	Frequency	%	Category
1.	$X > 40$	31	52.5	very High
2.	$40 \geq X \geq 33$	27	45.8	high
3.	$33 > X \geq 26$	1	1.7	low
4.	$X < 26$	0	0.0	very Low
Total		59	100	

Descriptive analysis for self resilience variable is obtained mean = 64,68, median = 63, modus = 61, deviation standard = 5,49, minimum score = 51 and maximum score = 81. The tendency description of self resilience variable score is presented in the form of frequency distribution at Tabel 2. Based on result of this research can be interpreted that class XII SMK Muda Patria Kalasan student has self resilience tendency in high category.

Table 2. Distribution tendency of self resilience

No.	Interval	Frequency	%	Category
1.	$X > 64$	28	47.5	very High
2.	$64 \geq X \geq 53$	30	50.8	high
3.	$53 > X \geq 42$	1	1.7	low
4.	$X < 42$	0	0.0	very Low
Total		59	100	

Descriptive analysis for health and safety variable is obtained value mean = 4876, median = 47, modus = 46, deviation standard = 477, minimum score = 40 and maximum score = 60. The of tendency description of health and safety variable score is presented in the form of frequency distribution at Tabel 3. Based on result of this research can be interpreted that class XII SMK Muda Patria Kalasan student has tendency of health and safety in very high category.

Table 3. Distribution tendency of self resilience

No.	Interval	Frequency	%	Category
1.	$X > 46$	34	57.6	very High
2.	$46 \geq X \geq 38$	25	42.4	high
3.	$38 > X \geq 30$	0	0.0	low
4.	$X < 30$	0	0.0	very Low
Total		59	100	

The path analysis of this research conducted on three variables. Self efficacy variable as the independent variable (X), resilience as a mediator variable (M), while health and safety attitude as the dependent variable (Y). Path analysis is used to determine the direct effect of self efficacy on health and safety attitude, resilience and influence of self-efficacy in mediating influence on attitudes health and safety attitude. Based on the results of the regression analysis, the regression formed three model is as follows.

$$Y = cX + e; \text{ with value of } c = 0,472; R^2 = 0,222$$

$$M = aX + e; \text{ with value of } a = 0,687; R^2 = 0,472$$

$$Y = c'X + bM + e; \text{ with value of } c' = 0; b = 0,400; R^2 = 0,307$$

Description: X = self efficacy; Y = health and safety attitude ; M = self resilience

The direct effect, the mediation effect and the total effect of self efficacy on health and safety attitudes are described in Table 4. Self efficacy affected health and safety attitudes through mediation of resilience variable with 12.9% effects.

Table 4. The calculation of total, direct and mediation effect results

	Path coefficient	Effective contribution
The direct effect (self efficacy effect (X) on health and safety attitudes (Y))	$c' = 0$	$c'.r(xy) =$ $(0) \times (0,472) = 0$
The mediation effect (self efficacy effect of (X) on health and safety attitude (Y) through self resilience (M))	$(a.b) = (0,687 \times 0,400)$ $= 0,275$	$(a.b).r(xy) =$ $(0,275) \times (0,472)$ $= 0,129$
Total effect	$(a.b+c') = (0,275+0)$ $= 0,275$	$(a.b+c').r(xy)$ $(0,275) \times (0,472)$ $= 0,129$

The results of this research indicate that the efficacy of class XII SMK Muda Patria Kalasan students influence on the health and safety attitude of the practice activity in the workshop with ($p < 0.05$). The influence of self-efficacy variable on health and safety attitude variable can be seen from the value of R square is 0.222. This value indicates that self-efficacy affects the students health and safety attitude in workshop of 22.2%. As many as 77.8% of them can be influenced by other factors than self efficacy. These factors are the individualvresponsibility, workplace safety and security regulations which is apply in the workplace [10].

Self efficacy determined a person's feel, think, motivate themselves and their behavior. According to Bandura [11], individuals with high self efficacy have more positive, success-oriented and goal-oriented. The self efficacy impact for individuals directly influence the selection of behavior [5]. Students who have high self efficacy will trying to motivate him to achieve the positive results. Anwar [11] suggests that high self-perceived efficacy to motivate individuals to act more cognitively appropriate and purposeful, especially an achievable goal is a clear goal.

This research indicated that self efficacy class XII SMK Muda Patria Kalasan students give effect to students resilience with ($p < 0.05$). Self efficacy has significant effect on the students resilience. The influence of self efficacy variable on resilience variable known of r square value for 0.472. The magnitude of these effects suggests that self efficacy affects student resilience for 47.2%.

The second hypothesis tests of this research results concludes that self-efficacy indirectly influence the health and safety attitudes of SMK Muda Patria Kalasan students through intermediary resilliensi self. self resilience mediated the effect of self efficacy on health and safety attitudes of class XII SMK Muda Patria Kalasan students of 12.9%. Self resilience mediating effect suggests that self efficacy influences students health and safety attitudes while self resilience has mediated entirely this model. Changes in self efficacy indirectly affect the self resilience esteem, resilience subsequent changes affecting student health and safety attitude.

Based on this research results above, it is known as much as 87.1% health and safety attitude is influenced by other variables that also mediating the relationship between self efficacy and health and safety attitude, among the others are knowledge factors, motivation, and the student's safety awareness. Self efficacy is a cognitive process that affects the motivation of a person's behavior [4]. How well does one determine or ensure the motives leading to the expected action according to the situation. Student's motivation to maintain safety-related positive impact on the health and safety

attitude. The attitude and safe behavior is influenced by the motivation of the individual to act safely. [12]. Individuals with higher efficacy has work with the ability to collect relevant information and take appropriate action [13]. Information about occupational health and safety increase students knowledge and awareness to maintain safety during practice. The knowledge and awareness of workplace safety to increase attention to safety [14].

Conclusion

Based on this research data and results obtained, it is concluded: (1) There is a positive and significant correlation between self efficacy attitudes with Health and Safety in class XII SMK Muda Patria Kalasan with $p = 0.000$ ($p < 0,05$), the effective contribution of self efficacy on health and safety attitude is 22.2%. (2) selfefficacy had a positive effect on health and safety attitude indirectly through self resilience. Influence of self efficacy on on health and safety attitude indirectly through self resilience is 12.9%.

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